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Title: Optimization of Orifice Meter's Energy Consumption

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- A new simple design to reduce the annual energy consumption of orifice meters is introduced.
- Design optimization with the help of CFD simulation and genetic algorithm is presented.
- The proposed design saves up to 33.5% of the orifice meter pressure loss.
- Significant reduction of the required installation distance upstream the orifice is achieved.
- 33.2% reduction of orifice losses under highly disturbed and distorted inlet flow is obtained.

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